

SUPPORT FOR THE AMENDMENT

This Amendment adds new Claims 34-35. Support for the amendments is found in the specification and claims as originally filed. In particular, implicit support for new Claim 34 ("the conductive and/or semiconductive areas of the composite surface are co-planar") and support for Claim 35 ("the composite surface is formed by a polycrystalline material; and each of the conductive and/or semiconductive areas of the composite surface is a face of a different monocrystal of the polycrystalline material") is found in the specification at least at page 27, lines 30-31 ("... selective grafting on certain faces of a polycrystal consisting of a paving of monocrystals ..."). No new matter would be introduced by entry of these amendments.

Upon entry of these amendments, Claims 1-2, 4-17, 20-24 and 33-35 will be pending in this application. Claim 1 is independent.

REQUEST FOR RECONSIDERATION

Applicants respectfully request entry of the foregoing and reexamination and reconsideration of the application, as amended, in light of the remarks that follow.

The present invention provides a process for mask-free localized grafting of organic molecules on a composite surface. The composite surface presents conductive or semiconductive portions and consists of a paving of different materials. Specification at page 6, lines 23-24.

Claims 1-2, 4-17 and 20-24 are rejected under 35 U.S.C. § 103(a) over U.S. Patent No. 4,269,682 ("Yano") in view of U.S. Patent No. 5,350,323 ("Boissel") and *Journal of Electroanalytical Chemistry*, 465: 200-208 (1999) ("Charlier").

Yano discloses a system for measuring chemical properties of a substance in an electrolyte. The system disclosed in Yano comprises a measuring unit with a reference

electrode comprising an insulated gate field effect transistor (FET) whose gate region is overlaid with a polymeric membrane and a pseudo reference electrode. Yano at column 3, lines 34-39.

The electrode presented in Yano's Fig. 3 is a two-layered structure of silicon dioxide (23) and of silicon nitride (24), while the reference (22) corresponds to the pseudo reference electrode. Yano at column 9, lines 15-23. Thus, the surface onto which Yano's ion-sensitive membrane (26) and hydrophobic organic membrane (25) are coated is not a composite surface, but instead is the surface of a multilayered composite material.

The surface disclosed in Yano cannot be considered as a composite surface. This surface is represented at Fig. 3 by the layer (24) of silicon nitride, i.e., a surface which does not present different areas of different materials. Yano discloses a surface composed by an identical material of a composite material.

The surface implemented in Boissel is made of either a cuprous base metal (column 1, lines 47-51) or a metal layer coating said base metal (column 1, lines 43-46 and lines 52-57). In both cases, the surface does not present any paving and cannot be considered as a composite surface according to the present invention.

The polymer film disclosed in Boissel is deposited on the surface by electropolymerization and under cathodic polymerization, as indicated at step (a) of the process. Boissel at column 2, lines 5-7.

Thus, Boissel's polymer film is deposited and not electrografted.

Contrary to the Office Action at page 4, lines 9-11, Applicants have not suggested that Charlier discloses depositing instead of electrografting.

Charlier implements an electrochemical quartz crystal microbalance (EQCM) which is a quartz crystal coated with Pt deposited over a Ti adhesion layer as disclosed at page 201, right column, last paragraph. The EQCM corresponds to a composite material. The surface

of the quartz crystal is uniformly covered with Pt and thus, considering this uniformity, cannot be considered as a composite surface.

Because the cited prior art fails to suggest the independent Claim 1 limitations of a "process for mask-free localized grafting of organic molecules ... onto a composite surface comprising conductive and/or semiconductive areas that are materials of different nature, the process comprising placing said organic molecules in contact with said composite surface; and electrochemically grafting an insulating film of said organic molecules on chosen, defined areas of said conductive and/or semiconductive areas by bringing said chosen, defined areas to a potential ...", the rejection under 35 U.S.C. § 103(a) should be withdrawn.

New Claims 34-35 are further patentably distinguishable over the cited prior art. The cited prior art fails to suggest the Claim 34 limitation that "the conductive and/or semiconductive areas of the composite surface are co-planar" or the Claim 35 limitations that "the composite surface is formed by a polycrystalline material; and each of the conductive and/or semiconductive areas of the composite surface is a face of a different monocrystal of the polycrystalline material".

In view of the foregoing amendments and remarks, Applicants respectfully submit that the application is in condition for allowance. Applicants respectfully request favorable consideration and prompt allowance of the application.

Should the Examiner believe that anything further is necessary in order to place the application in even better condition for allowance, the Examiner is invited to contact Applicants' undersigned attorney at the telephone number listed below.

Respectfully submitted,

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